OLD FORESTS OF SANDY LAKE

– David Patriquin

Date: Saturday, July 14thth
Place: Sandy Lake, Bedford
Weather: Sunny, 20˚C
Leader: David Patriquin
Participants: 16

The extensive forests of the Jack Lake lands and around Sandy Lake are not well known to Haligonians. I knew little about them until mid-2017, when I was asked if I would do a flora survey of 'Sandy Lake and Environs' for the Sandy Lake Conservation Association as part their efforts to protect the ecological integrity of the area. I was hesitant to do so because of other commitments, but a single visit on June 14th convinced me that it had to be done. I had seen Gaspereau in the shallows of Sandy Lake, three-ft diameter Hemlocks and White Pines, and sweeps of mixed Acadian forest with magnificent Yellow Birch, Sugar and Red Maples, and Red Spruce in addition to the White Pines and Hemlock. I conducted field trips on 22 days over the period of June 14th to November 1st, 2017; a few were on water (paddling) but most were on land. I wanted to produce a general description of 'what's there', rather than simply a floral list – the latter is another, ongoing project. Also, HFN's Clarence Stevens was conducting bird and other fauna surveys in the area at the same time, along with his Snapping Turtles rescue activities.

In the process of my surveys, I found many patches of what I would call 'Old Growth', with large diameter trees, snags, fallen dead trees (coarse and woody debris), often with sub-canopies of Striped Maple and Wych Hazel. I selected three such patches, characterised by different dominant tree species, for a formal assessment of their 'Old Forest Scoring' according to NSDNR procedures given in Nova Scotia's Old Forest Policy, August 2012 Report for 2012-2014. Colin Gray, the 'Old Forest' coordinator at the Mersey Tobeatic Research Institute, collaborated in that exercise.

The main criteria for Old Growth status by NSDNR's scheme are: greater than 30% crown closure; greater than 50% of basal area in climax species typical of the landscape; and greater than 30% of the basal area more than 125 years old. There are other variables measured but those are the critical ones for scoring.

A few summary stats for my three chosen sites are given below:

White Pine site – White Pine dominant, with some Red Spruce and Eastern Hemlock; occasional Yellow Birch and Red Maple; average age of larger trees 130 years; oldest 134 years. DNR classification – Old Growth.

Hemlock Site – Eastern Hemlock dominant, with some Red Spruce, Yellow Birch, and Red Maple amongst the larger trees; average age of larger trees 124.7 years; oldest 136 years. DNR classification – borderline Old Growth/Mature Climax (which one depends on whether you count 124.7 as 125 for Old Growth, or as 80-125 for Mature Climax.

Mixed Site – hardwood dominant, with Yellow Birch, Sugar Maple, Red Spruce, some Red Maple, and Hemlock amongst the larger trees; average age of larger trees 104 years; oldest 141 years. DNR classification – Mature Climax.

On this HFN field trip, we visited each of these sites, passing through forests in other successional stages or with differing degrees of past harvesting as we moved between them.

Two features of these forests changed the way I think about our forests in general and likewise impressed the HFN group when they saw them and learned how they came about. The two features are 'The Acadian Forest Love Affair' and 'Pit and Mound Topography'.

The Acadian Forest Love Affair is my descriptor for a physically intimate association of Yellow Birch and Hemlock that is common in the forests of Sandy Lake and environs.

Not counted in the NSDNR scheme (but I think it should be), Pit and Mound Topography refers to the uneveness of forest floor that in areas at Sandy Lake occur like a series of waves across the landscapes. I first became familiar with pits and mounds through a talk given by Donna Crossland and a field trip led by Elena Ponaramenko at an MTRI Conference on old forests held at Debert in the fall of 2016. A pit and a mound structure forms when a large tree is uprooted. The area where the tree once stood, – or part of it – forms a pit, and, after it has largely decomposed, the uprooted base forms a mound. We tend not to notice them as anything other than 'the ups and downs of the forest floor' until they are pointed out for what they are. The mounds at Sandy Lake area can be as much as a metre high, five metres in length and one to two metres wide, with the pit area typically one to two metres in diameter.

The mounds are preferred habitat and 'ground' for establishment of tree seedlings; most of the big trees we see today are found on top of old mounds, including Yellow Birch and Hemlock. These 'breeding' mounds are not found in forests with long histories of harvesting of big trees, nor in clearcut forests, so the Sandy Lake sites provide special opportunities to observe them.

In some places, pit and mound structures occur in a repeated series, with their mounds' long axes oriented perpendicular to the direction of wind which blew the

trees down; walking across them in the direction of the wind is something akin to swimming or paddling through a set of swells in the ocean. These mounds were formed by blowdowns of very large trees, during very big storms, which I estimate occurred about 150 years ago at many sites.

Pits often develop as vernal (temporary) pools, providing habitat for amphibians and other organisms requiring water for part of their life cycle. As the trees grow old and the mounds erode, their roots are exposed. This creates cavities for wildlife between the roots and the trunk.

Read and view photos and videos about those phenomena on the website in which I report the results of my surveys at **www.sandylakebedford.ca**. Then go to the area to view them yourself if you haven't been there!

In early June of 2018, HFN signed on as one of the first members of the Sandy Lake Regional Park Coalition. The Coalition's proposed park is "two thousand acres of rich ecosystems that stretch between the Hammonds Plains Road and the Sackville River, encompassing the lands and rivers between Sandy Marsh and Jack Lakes and the Sackville River. It has been recognised for nearly five decades – provincially, municipally, locally, and in multiple reports and studies – to be a special landscape worth protecting. Community efforts plus some twists of fate have allowed these lands to remain largely in good condition, and other twists of fate have caused protective processes to fail." (Source – pamphlet produced by SLCA).

Currently, approximately 1,000 acres are owned by HRM, so the Coalition is campaigning to see that an additional 1,000 acres is acquired and then put together with the currently-owned lands as the Sandy Lake Regional Park. (Go to **www.sandylake.org** for more information)

This is an endeavor that is well worth our support.

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